

Shurui ZHOU

Phone: +1 412 499 1612
Email: shuruiz@ece.utoronto.ca
<http://www.eecg.toronto.edu/~shuruiz>

RESEARCH INTERESTS

My research focuses on the collaboration and coordination challenges faced by interdisciplinary and distributed software development teams. I design, develop, and evaluate interventions (tools) to help software teams to collaborate more efficiently. My research uses methods from computer-supported cooperative work, empirical software engineering, and social computing.

ACADEMIC EMPLOYMENT

From July 2020 Assistant Professor, **University of Toronto**, Department of Electrical & Computer Engineering

EDUCATION

- Aug. 2014 - May. 2020 **Carnegie Mellon University**, Pittsburgh, PA
Ph.D. student, Software Engineering,
Institute for Software Research, School of Computer Science
Advisor: Christian Kästner
- Sept. 2011 - Jun. 2014 **Peking University**, Beijing, China
M.S. Dept. of Service Science and Engineering, School of Software and Microelectronics
- Sept. 2007 - Jul. 2011 **Xi'an Jiaotong University**, Xi'an, China
B.S. Dept. of Software Engineering, School of Software Engineering

WORK EXPERIENCE

- Jun. 2016 - Aug. 2016 **Qualcomm Technologies, Inc.**, San Diego, CA
Interim Engineering Intern,
Security Exploration Group (SEG)
A project of "Characterization of Features Using Community Detection"

TEACHING EXPERIENCE

- Fall 2018 Methods: Deciding What to Design (Teaching Assistant)
Spring 2019 Artificial Intelligence Methods for Social Good (Teaching Assistant)

PUBLICATIONS

Refereed Conference Publications

- **Understanding Collaborative Software Development: An Interview Study.** K. Constantino, S. Zhou, M. Souza, E. Figueiredo, and C. Kästner. In *Proceedings of the 15th ACM/IEEE International Conference on Global Software Engineering (ICGSE)*, New York, NY: ACM Press 2020.
- **How Has Forking Changed in the Last 20 Years? A Study of Hard Forks on GitHub.** S. Zhou, B. Vasilescu, and C. Kästner. In *Proceedings of the 42nd International Conference on Software Engineering (ICSE)*, New York, NY: ACM Press, May 2020
- **What the Fork: A Study of Inefficient and Efficient Forking Practices in Social Coding.** S. Zhou, B. Vasilescu, and C. Kästner. In *Proceedings of the 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (FSE)*, New York, NY: ACM Press, August 2019
- **How to Explain a Patch: An Empirical Study of Patch Explanations in Open Source Projects.** J. Liang, Y. Hou, S. Zhou, J. Chen, Y. Xiong, G. Huang. *The 30th International Symposium on Software Reliability Engineering (ISSRE)*, Berlin, Germany, October 2019.
- **Identifying Redundancies in Fork-based Development.** L. Ren, S. Zhou, C. Kästner, and A. Wąsowski. In Proceedings of the *27th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)*, pages 230--241, March 2019.
- **Identifying Features in Forks.** S. Zhou, Ş. Stănculescu, O. Leßenich, Y. Xiong, A. Wąsowski, and C. Kästner. Identifying Features in Forks. In Proceedings of the *40th International Conference on Software Engineering (ICSE)*, New York, NY: ACM Press, May 2018
- **Adding Sparkle to Social Coding: An Empirical Study of Repository Badges in the npm Ecosystem.** A. Trockman, S. Zhou, C. Kästner, and B. Vasilescu. In *Proceedings of the 40th International Conference on Software Engineering (ICSE)*, New York, NY: ACM Press, May 2018.
- **Elastic Resource Management for Heterogeneous Applications on PaaS.** H. Wei, S. Zhou, T. Yang, R. Zhang, Q. Wang. *The Fifth Asia-Pacific Symposium on Internetware. (Internetware'13)* Changsha, China, October 2013

Refereed Short Publications

- **An Exploratory Study to Find Motives behind Cross-platform Forks from Software Heritage Dataset.** A. Bhattacharjee, S. Nath, **S. Zhou**, D. Chakroborti, B. Roy, C. Roy, and K. Schneider. In *Proceedings of the 17th International Conference on Mining Software Repositories (MSR) - Mining Challenge Track*, 2020.
- **Improving Collaboration Efficiency in Fork-based Development.** **S. Zhou**. In *Proceedings of the Companion of the International Conference on Automated Software Engineering (ASE Doctoral Symposium)*, New York, NY: ACM Press, 2019.
- **Poster: Forks Insight: Providing an Overview of GitHub Forks.** L. Ren, **S. Zhou**, and C. Kästner. In *Proceedings of the Companion of the International Conference on Software Engineering (ICSE)*, New York, NY: ACM Press, 2018. Poster.
- **Extracting Configuration Knowledge from Build Files with Symbolic Analysis.** S. Zhou, J. Al-Kofahi, T. Nguyen, C. Kästner, and S. Nadi. In *Proceedings of the 3rd International Workshop on Release Engineering (Releng)*, New York, NY: ACM Press, May 2015.

FORMAL PRESENTATIONS

- **Invited talk: Improving Collaboration Efficiency for Software Development.** Peking University, Rochester Institute of Technology, Stevens Institute of Technology, University of Illinois Urbana-Champaign, Oregon State University, Drexel University, George Mason University, Stony Brook University, University of British Columbia, University of Toronto, University of Texas at Austin. Dec 2019 – Apr 2020
- **Versioning ML Models & Data in Time and Space.** Dagstuhl Seminar 19191, Software Evolution in Time and Space: Unifying Version and Variability Management, Wadern, Germany, May 2019
- **Extracting Configuration Knowledge from Build Files with Symbolic Analysis.** Feature-Oriented Software Development (FOSD) Meeting, Traunkirchen, Austria, May 2015
- **Identifying Features from Forks.** Feature-Oriented Software Development (FOSD) Meeting, Copenhagen, Denmark, May 2016
- **Evaluating INOX (Identifying Features in Forks).** Feature-Oriented Software Development (FOSD) Meeting, Grasellenbach, Germany, March, 2017
- **Identifying redundancies in Fork-based Development.** Feature-Oriented Software Development (FOSD) Meeting, Gothenburg, Sweden, June, 2018

PROFESSIONAL SERVICES

- **Organization Committee** for FOSD (Feature-Oriented Software Development) 2018 Meeting
- **Reviewer** for TSE 2019, TSE 2020
- **Sub-Reviewer** for ICSE 2020, FSE 2019, ASE 2019, ICSE 2018, ASE 2017, FSE 2017, SPLC 2017, ICSE 2017, VAMOS 2017, SPLC 2016, ASE 2015 and TSE 2015 invited by Christian Kästner and Yingfei Xiong
- **Member, Software Engineering PhD Graduate Admissions Committee at Carnegie Mellon University** in 2017

GRANT & AWARDS

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| • Helped with writing two NSF Software Hardware Foundation (small) proposals | 2019, 2018 |
| • NSF Student Travel Grant | 2019 |
| • NSF Student Travel Grant | 2018 |
| • Outstanding Student (Top 5%) from PKU | 2012 |
| • Scholarship of May 4th (Top 5%) from PKU | 2012 |
| • Excellent Graduation Thesis from Xi'an Jiaotong University (Top 1%) | 2011 |
| • Excellent Student Leader Award of Xi'an Jiaotong University (Top 5%) | 2010 |
| • Best Student Award from Xi'an Jiaotong University (5%) | 2009, 2008 |
| • Siyuan Scholarship from Xi'an Jiaotong University (10%) | 2010, 2009, 2008 |